

CLAIMS

1. A lock (10) for an opening leaf of a motor
5 vehicle, of the type comprising:
- operating means (12) for opening from the outside
and operating means (14) for opening from the inside,
- a primary lever (16) which is mounted so that it
can pivot about a fixed primary pin (18), between an
10 angular unlocking position and an angular locking
position, in order to inhibit the means (12) for
operating from the outside,
- a secondary lever (22) which is mounted so that it
can pivot about a fixed secondary pin (24),
15 substantially parallel to the primary pin (18), between
an angular unlocking position and an angular locking
position, in order to inhibit the means (14) for
operating from the inside,
- a driving member (30) which is connected to the
20 primary lever (16) in order to directly pivot the
primary lever (16), from its locking position toward
its unlocking position, during an operating phase
referred to as outside unlocking phase,
characterized in that a connection means (34) is
25 arranged between the primary lever (16) and the
secondary lever (22) so as to link the angular
displacement of the two levers (16, 22) during an
outside unlocking phase, with the aim of bringing about
global unlocking of the lock (10) consisting in
30 pivoting the two levers (16, 22) from their respective
locking positions toward their respective unlocking
positions.
2. The lock (10) as claimed in the preceding claim,
35 characterized in that the connection means is a link
rod (34) which comprises a point (36) of articulation
on the primary lever (16) and a point (42) of
articulation on the secondary lever (22).

3. The lock (10) as claimed in the preceding claim, characterized in that the position of the articulation points (36, 42) of the link rod (34) is selected so that, during the global unlocking phase, the secondary lever (22) reaches its unlocking position before the primary lever (16) reaches its unlocking position.

4. The lock (10) as claimed in the preceding claim, characterized in that:

- the link rod (34) is articulated at a fixed point (36) of the primary lever (16),
- the link rod (34) is articulated on the secondary lever (22) by means of an axial peg (42) which is borne by the link rod (34) and which interacts with an edge (54) of a slot (44) made in the secondary lever (22), so that the link rod (34) links the angular displacement of the two levers (16, 22) only during the global unlocking phase.

5. The lock (10) as claimed in the preceding claim, characterized in that the edge (54) of the slot (44) is a cam which is configured so that, during the global unlocking phase, the radial distance (R) between the peg (42) and the secondary pin (24) increases, with the aim of allowing the primary lever (16) to continue its pivoting motion as far as its unlocking position, after the secondary lever (22) has reached its unlocking position.

6. The lock (10) as claimed in the preceding claim, characterized in that the cam (54) comprises a final portion (60) relative to the global unlocking phase, which describes a defined angle (β , β') with respect to the direction (H'H) of displacement of the link rod (34), depending on the angular position of the secondary lever (22) during the global unlocking phase, and in that said angle (β , β') is:

- greater than or equal to ninety degrees, at the

start of the global unlocking phase, when the secondary lever (22) occupies its locking position,

- less than ninety degrees, during the final step of the global unlocking phase, when the secondary lever
5 (22) wholly occupies its unlocking position and the primary lever (16) does not yet occupy its locking position,

so that, during the final step of the global unlocking phase, the peg (42) is displaced wholly radially
10 outward with respect to the secondary pin (24), remaining in circumferential contact with the final portion (60) of the cam (54), in the direction of unlocking of the secondary lever (22).

15 7. The lock (10) as claimed in the preceding claim, characterized in that the final portion (60) of the cam (54) is substantially rectilinear and parallel to a radial direction of the secondary pin (24), so that, during the final step of the global unlocking phase,
20 the peg (42) is displaced in said radial direction with respect to the secondary pin (24).

8. The lock (10) as claimed in any one of claims 5 to 7, characterized in that the cam (54) wholly forms a V,
25 and in that, when the two levers (16, 22) occupy their respective locking positions, the peg (42) bears in the angle of the V (56) formed by the cam (54).

9. The lock (10) as claimed in any one of claims 4 to 8, characterized in that, when the two levers (16, 22)
30 occupy their respective unlocking positions, the peg (42) is housed in the slot (44) with a radial clearance, on the side directed away from the secondary pin (24).

35 10. The lock (10) as claimed in any one of the preceding claims, characterized in that each lever (16, 22) comprises two opposed circumferential stops which wholly determine the associated angular locking and

unlocking positions.

11. The lock (10) as claimed in any one of the preceding claims, characterized in that it comprises
5 means designed to make the secondary lever bistable.